DOCUMENT RESUME

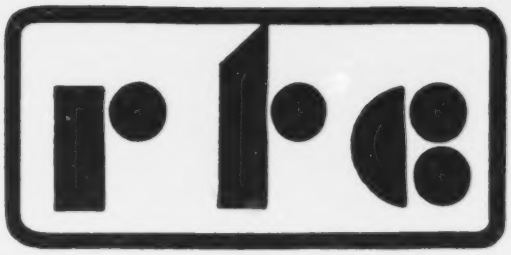
ED 267 228 CE 043 754

AUTHOR Bordieri, James E.
TITLE Employment Alternatives for Workers with Disabilities: An International Perspective. Research Report.
INSTITUTION Wisconsin Univ.-Stout, Menomonie. Stout Vocational Rehabilitation Inst.
SPONS AGENCY National Inst. of Handicapped Research (ED), Washington, DC.
PUB DATE 86
NOTE 39p.
AVAILABLE FROM Stout Vocational Rehabilitation Institute, University of Wisconsin-Stout, Menomonie, WI 54751 ($5.50).
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Affirmative Action; Comparative Analysis; Delivery Systems; *Disabilities; Educational Practices; Employment Opportunities; *Employment Practices; Federal Aid; Financial Support; Foreign Countries; Global Approach; Government Role; Grants; Mainstreaming; Personnel Integration; Policy Formation; *Public Policy; Rehabilitation Counseling; Rehabilitation Programs; *Sheltered Workshops; State of the Art Reviews; Tax Credits; *Vocational Rehabilitation

ABSTRACT

The employment alternatives available to disabled workers in various countries throughout the world were compared. Using a six-level model in which level 1 designated no employment and level 6 indicated competitive employment with no accommodation or shelter, the researchers examined the following employment practices: competitive employment (involving quota systems, government grants and tax credits to employers, and/or government subsidies); fully integrated employment (including supported employment and affirmative action); semi-integrated employment; and segregated employment. The use and relative effectiveness of each of these strategies both in the United States and abroad were compared. It was concluded that despite the well-documented failure of sheltered workshops in helping disabled workers become "job ready," they have been widely used in the United States as transitional places of employment. A more effective strategy would be to structure sheltered workshops to provide permanent employment for disabled workers so that these workers could be engaged in meaningful employment, interact with nondisabled co-workers, earn competitive wages, and receive fringe benefits equivalent to those in private industry. Significant national policy changes would be required if competitive and fully integrated employment for disabled workers were promoted through a quota-levy system, government grants and wage subsidies, and supported work programs. Five pages of references conclude the report. (MN)



Research Report

Research and Training Center

ED267228

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Employment Alternatives For Workers With Disabilities: An International Perspective

James E. Bordieri

CE 043 254

Stout Vocational Rehabilitation Institute
School of Education and Human Services

University of Wisconsin-Stout
Menomonie, WI 54751

ACKNOWLEDGEMENTS

This publication was funded in part by the NATIONAL INSTITUTE OF HANDICAPPED RESEARCH, Office of Special Education and Rehabilitation Services, U.S. Department of Education, Washington, D.C. The contents do not necessarily represent the interpretations or opinions of the Department of Education.

The author would like to thank Charles C. Coker, Ph.D. and Mary Comninel, M.S. for their insightful comments and suggestions on earlier drafts of this manuscript.

Published by:

Research and Training Center
Stout Vocational Rehabilitation Institute
School of Education and Human Services
University of Wisconsin-Stout
Menomonie, Wisconsin 54751

1986

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	i
INTRODUCTION	1
Vocational Rehabilitation in the United States	1
MODEL FOR COMPARING INTERNATIONAL APPROACHES TO VOCATIONAL REHABILITATION	4
COMPETITIVE EMPLOYMENT	7
Quota Systems	7
Government Grants and Tax Credits to Employers	10
Government Wage Subsidy	11
FULLY INTEGRATED EMPLOYMENT	12
Supported Employment	12
Affirmative Industries	14
SEMI-INTEGRATED EMPLOYMENT	16
SEGREGATED EMPLOYMENT	20
UTILIZATION OF INTERNATIONAL APPROACHES TO VOCATIONAL REHABILITATION IN THE UNITED STATES	24
Competitive Employment	25
Fully Integrated Employment	27
Semi-Integrated Employment	28
Segregated Employment	28
SUMMARY	29
REFERENCES	31

INTRODUCTION

The vocational rehabilitation of people with disabilities presents a major challenge to all nations of the world. The current system of rehabilitation in the United States has been a model for service delivery in other countries, yet it does not adequately address many needs of disabled Americans. This system is based on the belief that the goal of rehabilitation programs should be full independence and competitive employment in open industry (Vash, 1977). In fact, this is often not the case.

This monograph will review the employment policies for disabled workers and the approaches to vocational rehabilitation found in industrialized nations. Information will not be presented for developing countries since vocational rehabilitation in these nations is not a high human service priority. These less industrialized nations seem to pattern their rehabilitation efforts on techniques used in the United States. They are generally not as comprehensive given their more pressing social and health concerns. A discussion of vocational rehabilitation in the Soviet Union has also been omitted from this review. While knowledge on medical rehabilitation in the U.S.S.R. is readily available, there is little published information on the employment options of disabled Soviet citizens.

The monograph will review and analyze the applicability of international alternatives to the current sheltered and transitional employment options available to disabled Americans. Recommendations for changes within our current system and specific research and demonstration projects will be proposed to test the feasibility of these vocational alternatives for disabled workers in the United States.

Vocational Rehabilitation in the United States

It is helpful to have some background information on factors affecting vocational rehabilitation in the United States in order to assess the value of international alternatives. Historically, disabled persons in the United States have received rehabilitation services (e.g., vocational evaluation, work adjustment, training, job placement, etc.) and an opportunity for employment in rehabilitation facilities. Nelson (1971) has reported that the

first sheltered workshop started in 1837 at the Perkins Institution for the Blind near Boston, Massachusetts. Today, it is estimated that this number has grown to approximately 6100 rehabilitation facilities providing vocational services to an estimated 660,000 disabled individuals per year (Menz, 1983; 1985).

Vash (1977) has stated that the primary role of rehabilitation facilities in the United States is to provide those vocational services which allow a disabled person to become competitively employed in open industry. Several sources have argued, however, that rehabilitation facilities are deficient in this role. Greenleigh Associates (1975) reported that only 13 percent of clients enrolled in sheltered workshops were placed in competitive jobs in a year. Work Activity Centers and workshops serving primarily blind clients reported a competitive placement rate of only seven percent. In addition, a national audit by the General Accounting Office (1981) revealed that approximately 60 percent of sheltered workshops paid their clients wages significantly below wage standards established by the Department of Labor. These extremely low wages make it necessary for many disabled persons to rely on public benefits and/or their families for financial support.

In an attempt to improve the economic viability of rehabilitation facilities, the Wagner-O'Day Act was passed in 1938 making it mandatory for all government agencies to purchase certain items and services from qualified workshops serving individuals with visual disabilities. The National Industries for the Blind (NIB) was established to represent the sheltered workshops and to help coordinate the business transactions. Only non-profit organizations in which 75 percent or more of the clients were visually handicapped were allowed to participate in this program.

Under legislation sponsored by Senator Jacob Javits of New York, the Wagner-O'Day Act was extended in 1971 to include rehabilitation facilities serving sighted, severely disabled persons. This law, the Javits-Wagner-O'Day Act, required all government agencies to give first priority with respect to the purchase of products and services to prison industries and second priority to rehabilitation facilities serving the blind. In 1975, rehabilitation serving sighted and severely disabled clients were given second priority and Vash (1977) reports that the services component became almost the exclusive domain of these facilities.

Like the NIB and the original Wagner-O'Day Act of 1938, the National Industries for the Severely Handicapped (NISH) was established to help implement the new provisions of the Javits-Wagner-O'Day Act of 1971. NISH and NIB are very active in researching the commodities and services needed by government agencies and matching them to appropriate rehabilitation facilities. NISH reports that sheltered workshops utilizing NISH contracts pay approximately 70 percent higher wages to clients and have a competitive placement rate that is nearly twice as high as that of other workshops (Greenleigh Associates, 1975). However, only about 20 percent of rehabilitation facilities in the United States currently participate in the NISH program.

Due to the current high rate of unemployment in the United States, Conte (1982) has maintained that rehabilitation facilities will continue to find difficulty in meeting the goal of competitive placement for handicapped clients. Disabled people will have to compete for the limited number of jobs with other "marginal groups" such as youth, ethnic minorities, ex-offenders and the elderly. Thorton and Maynard (1985) have reported that approximately 75 percent of disabled Americans between the age of 16 - 64 years old did not have a job in 1982. In his analysis of 1980 census data, Bowe (1984) estimated that 52 percent of disabled Americans report that they are prevented from working by their disabilities. Bowe also noted that working age people with disabilities in our country are generally older, less educated, and have lower incomes than their non-disabled peers.

Similarly, Frey (1985) has estimated that the unemployment rate in the United States for disabled workers in 1984 was 72.6 percent, representing nearly a two percent increase from 1972. In addition, Frey has noted that the poverty rate was 26 percent for disabled workers, while only 10 percent for people without disabilities. Frey (1985) concluded that this discrepancy is indicative of the low paying, unskilled, entry-level jobs held by American workers with disabilities.

Despite the attempts of government legislation, disabled Americans face significant hardship in their attempt to succeed in the open labor market (Thorton & Maynard, 1985; Bowe, 1984; and Frey, 1984). This monograph will look at how other nations have addressed the employment needs of their disabled citizens and analyze the applicability of these strategies for use

in the United States. In order to assess their utility, a method for comparing the various international approaches is needed. The following section details a model for comparing the vocational rehabilitation systems found worldwide.

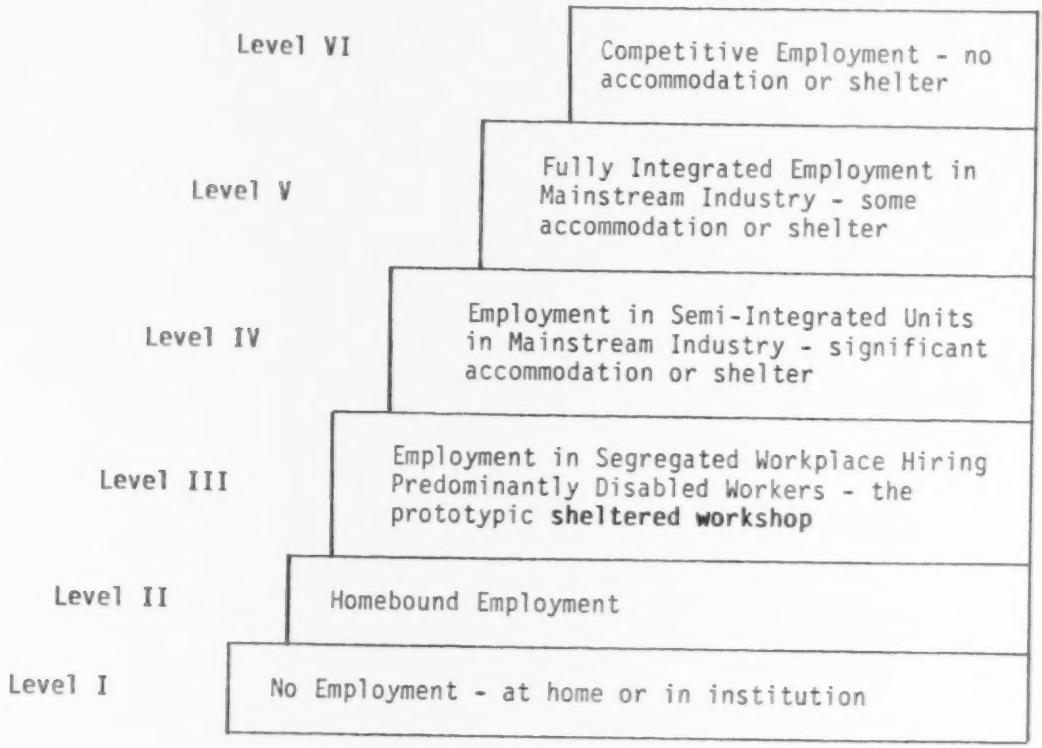
MODEL FOR COMPARING INTERNATIONAL APPROACHES TO VOCATIONAL REHABILITATION

Given the purpose of this monograph, a standard framework is needed for comparing the approaches to vocational rehabilitation found in different countries. Vash (1977) has offered one of the most complete models available detailing the employment options of disabled workers (see Figure 1). It is based on ascending employment levels ranging from Level I, where employment is not engaged in to Level VI, where one finds the disabled worker competitively employed without receiving a government subsidy or accommodations from industry.

Vash (1977) has defined accommodation as "something an employer provides to enable a worker to perform up to standards" (p. 1). Work phenomena such as job sharing, flextime, job site child care facilities as well as job site architectural changes to allow accessibility for disabled workers, would be examples of accommodations in industry. Shelter, on the other hand, refers to the way in which a job situation is altered to conform to the needs of workers with disabilities. Vash has stated that "shelter is something the employer provides for selected employees who are unable to meet the standards" (p. 1). Working through Vash's hierarchy of employment, one sees a reduction in the need for accommodation and shelter for the disabled worker. At the highest level of the model, Level VI, the disabled person is engaged in Competitive Employment without needing any special privileges from the employer. At Level V or Fully Integrated Employment in Mainstream Industry, some accommodation or shelter is needed for the disabled worker. The disabled worker at Level IV or Employment in Semi-integrated Units in Mainstream Industry requires significant accommodation and shelter to maintain the job. Level III or Employment in a Segregated Workplace represents the traditional sheltered workshop. At Level III, the handicapped person is working primarily with other disabled workers and below average

FIGURE 1

Vash's (1977) Hierarchy of Employment Options for Disabled Workers


Level VI
Competitive Employment - no accommodation or shelter
Level V
Fully Integrated Employment in Mainstream Industry - some accommodation or shelter
Level IV
Employment in Semi-Integrated Units in Mainstream Industry - significant accommodation or shelter
Level III
Employment in Segregated Workplace Hiring Predominantly Disabled Workers - the prototypic sheltered workshop
Level II
Homebound Employment
Level I
No Employment - at home or in institution

productivity is tolerated. Levels II and I represent homebound employment and not working at all, respectively.

Other writers have expanded on Vash's (1977) hierarchical model. Using a dependent-independent continuum, Durand and Neufeldt (1980) have suggested that the highest level of employment is Individual Competitive Employment, in which the disabled person works typical hours in regular industry. Farley (1978) referred to this highest level as "individual placement of the disabled person in open employment without any adaptations or concessions on working hours and conditions" (p. 185). Corresponding to Vash's Level V, Durand and Neufeldt have discussed Competitive Work with Support. At this level, the disabled person works with non-handicapped workers in regular industry. Farley (1978) referred to this level as placement of the disabled person in open employment with adaptations of the workplace and/or concessions in working conditions. Vash's Level IV of employment parallels

what Durand and Neufeldt called Semi-Sheltered Employment. At this level, disabled persons work as a group in regular industry. Farley (1978) labeled this level as "group placement of a number of handicapped persons to work in open employment as a team under the direction of the employer" (p.185).

There is consensus that Vash's Level III of employment options represents Sheltered Workshops which employ predominantly disabled workers. Durand and Neufeldt have added that sheltered employment is largely subsidized by external funding and Farley emphasized that in this setting, the disabled worker is protected from the competition and stress of open employment. Durand and Neufeldt have not offered a stage in their model for Vash' Level II employment (i.e., homebound employment). Farley (1978) referred to this stage as "self employment where the worker is engaged in his home or workshop independently or with some aid or supervision from a sheltered workshop or other rehabilitation facility" (p. 185).

Conte (1983) has included Affirmative Industries in Vash's Level V of employment alternatives for disabled workers. Affirmative Industries are businesses that make a strong effort to provide disabled workers with the opportunity for valued employment. An affirmative industry differs from sheltered employment in the following four ways:

1. Affirmative industries operate exclusively as businesses. Disabled workers are full-time employees who do only work related tasks; no rehabilitation services are provided.
2. In contrast to the often times monotonous tasks found in sheltered workshops, affirmative industries provide workers with challenging and valued tasks and the modern technology to do them.
3. Affirmative industries employ workers with and without disabilities. It is believed that integrated employment will enhance the development of positive work attitudes and habits leading to increases in the productivity of disabled workers.
4. Affirmative industries are more self sufficient than sheltered workshops. Conte (1983) has estimated that workshops receive between 35 and 100% of their funding from external (public) support. In contrast, affirmative industries are approximately 75% to 90% self sufficient.

Similarly, Durand and Neufeldt (1980) have discussed what they call Sheltered Industries as an employment option for disabled workers. Sheltered

industries are very much like affirmative industries in that they employ disabled as well as non-handicapped workers, they are less subsidized from outside sources than sheltered workshops, and they are run as businesses.

In summary, Vash's (1977) model, with the addition of affirmative industries in Level V (Conte, 1983), is used to explore the international alternatives for employment of workers with disabilities. Starting with competitive placement in industry and working through the fully integrated, the semi-integrated, and the segregated employment options of disabled persons, the following sections will make comparisons among the vocational rehabilitation systems found in industrialized nations.

COMPETITIVE EMPLOYMENT

Vash's (1977) Level VI of employment represents competitive work in industry for the disabled person without any accommodation or shelter. Competitive employment for handicapped workers is greatly emphasized in the United States yet few national policies exist to promote disabled workers into the open labor market. Internationally one finds quota systems, government grants and tax credits to employers, and wage subsidies as examples of government policies and initiatives that attempt to get disabled workers employed in open industry. Each of these strategies will be discussed below.

Quota Systems

A quota-levy system, or simply, a quota system is based upon legislation mandating the employment of workers with disabilities (Kulkarni, 1983). Although they do not exist in the United States, quota systems have been utilized by many nations since World War I in an attempt to get handicapped persons employed in competitive industry. Private and public employers of a given size are required to employ a certain percentage of disabled workers. The quota percentage, size criteria of the organization as well as fines and levies for noncompliance vary greatly among countries. The quotas range from 1.5 percent for employers with 67 or more workers in Japan (Kulkarni, 1983) to 15 percent for businesses having more than 35 employees in Italy (Croxen,

1982). Other examples of quotas are found in The Netherlands (2 percent), England and Ireland (3 percent), Israel, Egypt, (5 percent) and the Federal Republic of Germany (6 percent).

Vash (1977) and Redkey (1975) were clearly pessimistic in their reactions to quota systems. They have argued that quota systems do not work because employers seldom adhere to the law. The fines and levies for non-compliance are simply looked upon by employers as a cost of doing business. Similarly, Mintaredja (1978) has contended that quota systems are inappropriate for developing nations. Speaking from his experiences in Indonesia, Mintaredja has claimed that poverty, unemployment, illiteracy, and health care are more prepotent societal concerns than vocational rehabilitation. If anything, enforced quota laws may cause increased animosity towards disabled citizens due to preferential selection for employment in non-industrialized nations.

In his review of vocational rehabilitation in Great Britain, Stubbins (1982) has contended that the quota system should not be viewed as a simple solution for reducing unemployment among disabled workers. In order to count on the quota of an employer, a handicapped person must be entered on the Register of Disabled Persons. The number of disabled persons on this Register is declining, however, due to the perceived stigma associated with it. As a result, many British employers report that it is increasingly more difficult to meet the 3 percent quota. This is also attributed to the supposedly deteriorating quality of persons on the Register and the ease with which employers can get exemptions. Between 1961 and 1978, the percentages of British firms fulfilling their quota declined from 61 to 37 percent (Kulkarni, 1983). Stubbins has cautioned that these numbers are very crude estimates because many firms employ disabled workers who simply are not on the Register. He concluded that most British employers try to be in compliance with the existing quota laws and eliminating the official Register or making it voluntary would make their task easier.

Other writers are more positive about quota systems as a vocational alternative for disabled workers. Hahn (1984) has argued that disabled persons themselves are in strong favor of mandatory legislation to ensure them access into competitive employment. He also noted that in the European nations that use quota systems, complaints about reverse discrimination are

nonexistent. In the recent times of high unemployment, no major objections have been raised that quota systems give disabled workers an unfair advantage in the labor market. Similarly, Cooper (1983) and Cornes (1984) have spoken highly of quota systems, especially in times of decreasing manpower demands.

Kulkarni (1983) has provided an extensive review of quota systems in Great Britain, the Federal Republic of Germany and Japan. Like Stubbins (1982), Kulkarni found that part of the problem of enforcing the system in England revolves around the issue of registration of people with disabilities. He also added that the quota system cannot be considered a failure. Given the high rates of unemployment in England, approximately 50 percent of the persons with disabilities are in the work force.

Kulkarni (1983) also offered recent data to support the growth and acceptance of the quota system in the Federal Republic of Germany. Between 1975 and 1978, adherence to the 6 percent quota has increased steadily from an average compliance level of 3.8 percent to 4.8 percent. Only 6 percent of severely handicapped persons were unemployed in 1978. Kulkarni has also reported a positive relationship between the size of the company and rate of quota compliance. Firms with 100,000 or more workers readily complied with the 6 percent quota. In addition, the levy/fine part of the quota system has generated considerable financial resources that are used to subsidize other employment schemes for German citizens with a disability. To date, this money has been used to cover the expenses associated with job site accommodation and travel to the workplace. Jochheim (1985) has also noted that the quota system in Germany has been more well received by public than private employers. Similar to Great Britain, Jochheim concluded that the few problems that exist with the system are due to legislation requiring the classification of disabilities based on level of severity.

The Japanese quota system was first introduced under the Physically Handicapped Persons Employment Promotion Law of 1960. In 1976, an amendment was passed which enacted a levy system for non-compliance (Kulkarni, 1983). Compared to other countries, the quota percentages are set low (1.5 for private businesses and 1.8 percent for government agencies). In 1978, slightly better than 50 percent of all physically disabled persons were working in competitive employment and a levy collection totaling 80 million U.S. dollars was generated. These resources were used as cash grants to

employers hiring disabled workers above their quota and reinvested into new vocational rehabilitation projects.

A unique feature of the Japanese quota system is that it only applies to physically disabled persons. Persons with mental handicaps are currently not covered by this law. According to Matsui (1985), the Japanese government is now considering an extension of this law to include developmentally disabled individuals. At present, Japan's estimated 35,000 severely disabled clients are served primarily in sheltered workshops and work activity centers.

Government Grants and Tax Credits to Employers

Stubbins (1982) has described the Job Introduction Scheme in Great Britain as a national program which attempts to induce employers to hire disabled workers. Under this program, organizations are given grants to pay a disabled person's salary for up to 13 weeks of trial employment. Grants are also made to employers to modify the job site to ensure the retention of a disabled worker. The program also provides financial assistance to disabled workers for travel to work if public transportation is unavailable and permanent free loan of special aids (e.g., prostheses, wheelchairs, tape recorders, etc.) to help in the accommodation of the disabled person to the work site. Stubbins (1982) reported that rehabilitation personnel are generally pleased with the Job Introduction Scheme and it works particularly well with small companies. Greenleigh Associates (1975) and Cho (1984) have also noted that grants are made to employers in Germany, Great Britain and Japan for work place modification and to purchase special tools and equipment that may be needed by disabled workers.

A similar program exists in the United States as the Targeted Jobs Tax Credit. Enacted in 1978, this program rewards employers with tax credits for hiring workers from seven targeted groups. These include handicapped persons receiving vocational rehabilitation services, Vietnam era veterans, state and local welfare recipients, persons 18 to 24 years of age from low income families, youth participating in cooperative education programs, recipients of Supplemental Security Income, and ex-offenders. An organization is entitled to a tax credit of 50 percent of the first $6,000 of the worker's earnings in the first year of employment and 25 percent of the first $6,000

in wages paid during the second year of employment. Although in existence for over five years, little is known about the effectiveness of the Targeted Jobs Tax Credit on the employment of disabled workers.

Government Wage Subsidy

Sweden and The Netherlands offer two of the most comprehensive disability support systems in Western Europe (Burkhauser, 1985). Through very active job creation programs, these two countries serve as prime examples of government supported employment for disabled workers. In Sweden, work is viewed as critical to the self worth of the individual and only those considered too severely disabled to work are permitted to refuse government supported employment. In 1979, over 64,000 disabled workers were employed at competitive wages in sheltered workshops, archives programs and special relief projects in industry. Similarly, The Netherlands is strongly committed to providing employment for its disabled citizens. Unlike Sweden, however, disabled persons may be eligible for income support programs (i.e., disability pensions) instead of accepting a government supported job. In 1980, 483,000 Dutch citizens participated in disability pension programs while 74,000 were employed in government subsidized work for the disabled (Emanuel, Halberstadt, & Petersen, 1984).

In the United States, Titles I, II, and IV of the Comprehensive Employment and Training Act (CETA) of 1973 called for government subsidized employment programs in the public sector for primarily socially disadvantaged as well as disabled workers. CETA represented a shift in American employment policy toward that of Sweden and The Netherlands. In 1980, CETA and sheltered workshop programs employed over 1,096,000 disadvantaged and handicapped workers (Burkhauser, 1985). The collapse of the public job provisions of the program in 1982 saw approximately 900,000 CETA workers lose their government subsidized positions. The Job Training and Partnership Act of 1981 has replaced CETA and has attempted to obtain employment for disabled persons in private industry.

Currently, Sweden and The Netherlands have maintained the commitment to government subsidized employment for disabled workers. In contrast, levels of public service employment for American workers with disabilities have

returned to those of pre- CETA days. Burkhauser (1985) has commented that "a common policy assumption in all three countries during the 1970s was that the provision of temporary jobs by government would lead to permanent jobs in the open market" (p. 24). Many believe that the failure of CETA to achieve this goal was one of the major reasons for its termination. However, the government subsidized programs of Sweden and The Netherlands have not fared much better in obtaining competitive jobs in private industry for disabled workers. The jobs receiving wage subsidies from the government have tended to become permanent placements for disabled workers in these two European countries.

FULLY INTEGRATED EMPLOYMENT

At Vash's (1977) Level V of employment, some accommodation is needed to assist the disabled worker in maintaining a job in mainstream industry. Two examples of fully integrated employment are the supported employment model and affirmative industries.

Supported Employment

Conte (1983) has argued that the rehabilitation system in the United States is based on the assumption that a disabled person must have certain "pre-vocational" skills before being considered for competitive placement. As a result, many severely and/or developmentally disabled individuals who lack these skills have been denied access to mainstream industry. These people find their major vocational alternatives in rehabilitation facilities.

Advocates for supported employment programs (see Brown, Nisbet, Ford, Sweet, Shraga & Gruenwald, 1982; Bellamy, Horner & Inman, 1979) have attempted to refute this assumption of prerequisite skills needed for competitive employment. Working with primarily moderately to severely retarded individuals without prior competitive work experience, Wehman (1981) has offered a very labor intensive, step-by-step approach for achieving competitive placement. The supported work model calls for the disabled person being placed in a job in open industry, getting extensive job site

training and ongoing assessment, and, when necessary, receiving job retention assistance from his/her counselor. Revell, Wehman and Arnold (1984) have claimed that the supported work model deviates from the traditional "train-place" philosophy of the federal vocational rehabilitation process and emphasizes a "place-train" approach to competitive job placement.

The labor intensive aspect of supported work programs relates to the role of the rehabilitation counselor and/or the job coach in this process. Project staff go directly to employers and identify potential jobs for their disabled clients before the employer meets the applicant in a well rehearsed interview. The counselor's role does not end with job placement; staff remain involved with the employer and client on an as needed basis to ensure successful work performance. Each job placement requires the counselor to deliver on-the-job training to each disabled worker. Behavioral techniques are also used to teach clients how to do their jobs more effectively.

Bellamy and Melia (1984) have discussed three criteria that distinguish the supported employment model from other types of vocational programs. To qualify as supported employment, the disabled person must be engaged in full or part-time work at wages commensurate with productivity. Consistent with U.S. Department of Labor standards, a participant in a supported work program may receive less than the minimum wage. Secondly, the program participant must require ongoing support necessary for continued employment. This support may include subsidies to employers (to offset training and supervisory costs), stipends to supplement the wages of workers, ongoing training and counseling, assistance with housing, money management, and other non-work related activities. Finally, supported work programs require that participants work in settings that permit interaction with nondisabled supervisors, co-workers and/or customers. Supported work programs target severely disabled individuals who historically have been placed in work activity centers with low competitive placement rates.

Hill, Hill, Wehman, Revell, Dickenson, and Noble (1985) have estimated that it costs roughly $2,600 per year to provide supported employment to each disabled worker who is placed and trained on the job. Thornton and Maynard (1985) reported that this investment compares favorably to the findings of the U.S. Department of Labor (1980) and Greenleigh Associates (1975) studies in which public subsidies were more than $6,000 per year for clients in

sheltered workshops and approximately $2,880 per year for participants in work activity programs. Thornton and Maynard (1985) have cautioned, however, that none of the above studies used a valid comparison group to assess the merit of supported employment programs. In response to this controversy, the Office of Human Development Services of the U. S. Department of Health and Human Services has recently requested proposals (see Federal Register, September 4, 1985) for additional research to evaluate the costs and impact of supported employment programs. In this Request for Proposals, models of exemplary supported employment programs have been identified at the Harbor Regional Center in Torrance, California and the Maine Medical Center in Portland, Maine.

Affirmative Industries

The affirmative industry model also offers a fully integrated employment alternative to disabled workers. In an attempt to negate the major problems of sheltered employment, Conte (1983) and Durand and Durand (1978) have emphasized that this model attempts to provide disabled members of society with the opportunity for meaningful employment. An affirmative industry employs both disabled and non-disabled employees working together on challenging tasks. They are operated exclusively as businesses and they strive for self sufficiency.

An excellent example of an affirmative industry is found in Sidney, Australia. Centre Industries was established in 1961 as a sheltered workshop to provide training and employment for young adults with severe cerebral palsy. It is a division of the Spastic Centre of New South Wales, a non-profit organization (Acton, 1981; Cho, 1984). Centre Industries offers fully integrated employment for approximately 300 disabled and 400 non-disabled workers (Desmond, 1983). No preferences are given to the disabled workers; they use the same equipment and earn the same piece work wages as the non-handicapped workers. Extensive rehabilitation engineering techniques have been applied to allow disabled employees to overcome functional limitations. Although officially classified as sheltered workshop for the purpose of receiving a small government subsidy for rehabilitation expenses, Cho & Schuermann (1980) have presented convincing data attesting to

the cost effectiveness of its operation. Centre Industries competes very effectively in the telecommunications industry of Australia and recorded sales of approximately nine million U.S. dollars in 1982. Cho (1984) also reported that Centre Industries has had ". . . technical assistance agreements with several oversea companies such as General Electric Company and General Telephone & Electronics of the United States, SAGEM of France, and Jujistu of Japan" (p. 56).

Jonus (1976) has attempted to replicate this affirmative industry model in the United States. Center Industries in Wichita, Kansas started out in 1975 by successfully generating most of its income by making automobile license plates for the state. Since then its direct manufacturing and contracts have expanded to other local businesses such as the Boeing Military Airplane Company (Cho, 1984). The firm currently employs 48 disabled and 20 nondisabled workers and reports an average annual sales volume of $1.7 million. No preferential treatment is extended to employees with disabilities; they use the same equipment and earn equivalent piece rate wages as the non-handicapped workers. According to Vash (1977), Center Industries in Kansas differs from the operation in Australia in that it employs a higher percentage of disabled workers (65 to 30 percent). In addition, Center Industries in Kansas emphasizes that employment at the facility is transitional and the goal is competitive placement. Centre Industries in Australia, however, perceives the disabled worker as a full-time permanent employee, thus negating the need for placement in open industry.

The Paraplegics Manufacturing Company, Inc. (PAMCO) in Bensenville, Illinois is another example of a successful affirmative industry. Started in 1951 by 70 paraplegic veterans as a segregated for-profit business, PAMCO's current workforce is composed of about 100 disabled and non-disabled persons. The company manufactures primarily electronic and mechanical assemblies with major contracts with Western Electric, Motorola, Los Alamos Scientific Laboratories, and American Telephone and Telegraph. The president of PAMCO, Dwight Guilfoil (personal communication, October 14, 1985), has estimated that the company's two million dollars in business results in an estimated profit of $200,000 per year. Vash (1977) has contended that PAMCO is a prime example of a "business by the disabled/for the disabled" (p.16).

In addition to the United States, the affirmative industry model of Centre Industries has been implemented in Japan under the government sanctioned "model factory" program. Cho (1984) has reported that in 1979 there were 60 model factories operating in light manufacturing industries. The Japanese government offers low interest loans to these small for-profit businesses provided that at least 50 percent of the employees are disabled and the loan is used only for the acquisition of capital assets and not to cover general operating expenses. Disabled workers employed in model factories earn significantly more money than those in sheltered workshops (Cho, 1984).

Although employing proportionally fewer nondisabled workers than Centre Industries and model factories, Japan Sun Industries of Beppu, Japan may also serve as an example of an affirmative industry. Started in 1965 as a small sheltered workshop with 15 clients, Japan Sun Industries employed 320 physically disabled workers and a small number of nondisabled employees in 1980 (Acton, 1981). It is primarily a profit making business doing production work in the electronics industry.

From its profits and the procurement of grants, Japan Sun Industries has created the Human Resources Institute to develop technology that will enhance the vocational opportunities of severely disabled workers. The mission of the organization is to successfully integrate disabled persons into work settings as well as other areas of community life. Japan Sun Industries has opened a supermarket, restaurant, barber shop and a local branch of a bank in the Beppu community and all these operations employ disabled and non-disabled workers. Acton (1981) concluded that Japan Sun Industries has become so active as a community center that it must turn down or defer additional proposals for enterprises that will employ workers with disabilities.

SEMI-INTEGRATED EMPLOYMENT

At Vasn's (1977) Level IV of employment, the disabled worker needs significant accommodation and shelter to maintain a job in semi-integrated units of mainstream employment. Vash (1977) has defined this employment option for a disabled person as an enclave in industry. This program type,

unlike the sheltered workshop and affirmative industry models, ". . attempts to minimize duplication of effort and overhead costs by maximizing the usage of industrial sites, equipment and resources" (Conte, 1983 p. 15). Other writers have referred to this employment alternative as work crews (Hansen, 1969), job worksites (Usdane, 1967; Gerber, 1979), workshops-without-walls (Brickey, 1974), work stations (Conte, 1983), work stations in industry (Hagner & Como, 1982) and satellites (Gentile, 1977). Although each term may have a slightly different connotation, the basic concept of a small grouping of disabled workers in an industrial setting is evident from descriptions of these programs. Generally, a section of the job site (e.g., factory) is set aside for workers with disabilities and they are paid either directly by the employer or through subcontracts with the rehabilitation facility. In other situations, the business contracts with the facility to have a work crew of disabled workers sent to the job site to perform specific duties (e.g, janitorial services). Vash (1977) emphasized that although used extensively in the United States and Europe (i.e., England, Denmark, Sweden, and The Netherlands), the role of enclaves is perceived differently. European enclaves are thought of as full-time, permanent employment, while in the United States they are seen as transitional places to work until competitive placement can be achieved.

The first enclave program in the United States was started by Fountain House in New York City in the 1940's. Burger (1978) reported that this program placed psychiatrically disabled persons in industrial settings under the supervision of Fountain House staff. The work performance of the clients was guaranteed by the agency and the program was structured to be transitional (3-6 months, with the goal of competitive placement. The Institute for Information Studies (1982) estimates that 97 rehabilitation organizations have attempted to replicate the enclave program of Fountain House in the United States.

Altro Workshops, Inc. of New York has also developed an enclave program providing a transitional employment opportunity for persons with psychiatric disabilities (Gerber, 1979). Like Fountain House, this enclave program places clients in an industrial work setting under agency supervision. The program of Altro Workshops differs, however, in that ". . . job worksites were workshop subcontracts that were performed at the contract site instead

of in the workshop" (Conte, 1983, p. 17). In contrast to the clients in the Fountain House enclave program who were paid directly for their work by the private businesses, enclave clients at Altro Workshops were paid through the facility.

Work crews composed primarily of persons who were moderately mentally retarded have been used to perform clean-up and basic groundskeeping tasks in several California state parks. Hansen (1969) has reported that this form of enclave program has met with considerable success. With careful supervision, the participants of this program engaged in lawn work, ditch cleaning, weeding, brush removal, and general gardening. Vash (1977) has discussed a similar successful work crew program serving developmentally disabled Israeli youth.

Another example of semi-integrated work for disabled individuals is found in the social employment program of The Netherlands (Redkey, 1975). Disabled workers are screened by the Labor Department and those who have a low probability of being placed in competitive employment are enrolled in this program. There are three main approaches to social employment with the majority of workers (i.e., 60 percent) employed in "industrial workshops."

These workshops function as sheltered employment and rely on prime manufacturing and contracts with industry. Approximately 15 percent of the program participants are involved in "clerical projects" which function as enclaves in private industry, and the remaining 25 percent work on "open air projects" which serve as work crews cleaning up municipal parks. The Dutch government heavily subsidizes social employment thus permitting competitive wages to be paid to program participants.

Similarly, Sweden offers semi-integrated employment to disabled workers through the Archives Program. Redkey (1975) reported that approximately 12,000 disabled people are employed in this program in public institutions (e.g., museums, libraries, hospitals, etc.) with the government accounting for 33 - 100 percent of their competitive wages. Redkey has been very keen on using this form of semi-integrated employment in the United States. He has felt that an approach such as Sweden's Archives Program could be readily adaptable to many white collar jobs that exist in the civil service of our country.

Sweden's Adjustment Team concept (Redkey, 1975) also offers a disabled

person an opportunity for semi-integrated employment in mainstream industry. The adjustment team attempts to find jobs in industry for the disabled worker. Each plant or factory has a team composed of an employer representative, a labor union representative, a representative of the worker's council at the plant, and a representative from the employment office. The latter representative's responsibility is job placement for the disabled worker. The philosophy of the program is to find work to suit the disabled worker instead of a worker to suit the job. The method relies on educational approaches for the employers and full cooperation of all representatives involved. As with quota systems, the Swedish government can require that an employer hire only those applicants referred by the employment office. Sjostrom (1985) has estimated that 5,000 adjustment teams currently exist in Sweden and they are highly endorsed by labor unions. This government sanctioned program has been successful in facilitating the recruitment and retention of disabled workers in industry and improving the quality of working life of handicapped employees.

In France, the Groupments Interprofessionels Regionaaux pour la Promotion de L'Emploi des Personnes Handicapees (GIRPEH) presents another example of an innovative employment program for disabled workers (Mallet, 1985). Created in 1977, the purpose of GIRPEH is to promote employment opportunities for handicapped individuals in fully and semi-integrated work settings. Like the Adjustment Team concept of Sweden, the major objectives of GIRPEH are:

- to help firms integrate and manage their handicapped employees,
- to promote the integration of handicapped persons seeking employment,
- to develop ties between businesses and organizations which provide sheltered work areas for the handicapped (Mallet, 1985, p. 143).

GIRPEH has its headquarters in Paris and nine regional offices throughout France. The organization functions with a small permanent staff assisted by about 40 volunteer counselors who are generally retired personnel managers from industry. As a not-for-profit organization, GIRPEH is primarily dependent on funding from the private sector companies it serves and on subsidies from the government. Mallet (1985) has concluded that GIRPEH has been very successful in its role as liaison among business firms, government, rehabilitation facilities and disabled workers themselves.

SEGREGATED EMPLOYMENT

At Vash's (1977) Level III of employment, the disabled worker is found in the traditional sheltered workshop, segregated from mainstream competitive employment. Few nondisabled workers are found in this setting, and the sheltered workshop is largely subsidized by external funding to assure its existence. The well documented disadvantages of sheltered workshops have been previously discussed. In this section, examples of segregated employment that have met with success will be reviewed.

In the United States, Abilities, Inc. has been touted as an example of excellence for segregated employment of disabled individuals (Dietl, 1985). Abilities, Inc. is part of the Human Resource Center that was founded in 1952 by Dr. Henry Viscardi. Other divisions of the Human Resource Center include the Human Resource School, the Research and Training Institute, Vocational Rehabilitation Services, and the National Center for the Employment of the Handicapped. Offering sheltered employment to more than 100 disabled individuals, Abilities Inc. has major contracts with the Equitable Life Assurance Society of the United States, IBM, New England Bell, Sperry Gyro, United States Department of Defense, and the Westinghouse Electric Corporation, to name only a few. Production in the areas of electronics and telecommunications, data processing, and other clerical and industrial tasks are the chief areas of operations. A gift shop is also in operation which realizes $30,000 per year.

In conjunction with the other divisions of the Human Resource Center, Abilities Inc. conducts rehabilitation programs designed to place disabled workers in competitive industry. Its placement services work very closely with the more than 150 companies in the surrounding area to establish working arrangements to hire severely disabled workers. Like the supported employment model (Wehman, 1981), Human Resource Center staff also provide extensive follow-up services to both client and employer to ensure a satisfactory result.

Taylor (1983) has described a successful Abilities, Inc. program in New Zealand. Started in 1959, Abilities currently operates with a staff of 70 people on the North Shore of Auckland. The almost exclusive disabled work force receive wages comparable to general industry. Although technically a

sheltered workshop, Abilities, Inc. provides a normal business environment with emphasis on profit making. The work is balanced in complexity in order to be suited to all levels of disabilities. Contracts range from simple packaging and assembly operations to complex electronics manufacturing. The profits and revenue generated from existing contracts is used for project expansion. Abilities, Inc. is currently implementing a new center to offer vocational opportunities to severely disabled individuals and exploring the feasibility of starting a self-supporting horticultural project.

Australia offers several examples of segregated employment worthy of note. Acton (1981) has reported that Bedford Industries of Adelaide, South Australia has grown from a small sheltered workshop to an industrial complex with 15 divisions. Furniture production, printing, textile processing, and computer services are the major activities for its more than 700 workers most of whom are disabled. In addition, Bedford Industries owns and operates a 390 acre farm, a hotel, and a food processing plant, all employing disabled workers (Dickerson, 1983).

Bedford Industries also provides vocational evaluation and training services and more than 1,200 disabled workers have been competitively placed in the past 10 years (Acton, 1981). A Personal Development Center and several programs in independent living have been initiated. Bedford Industries receives financial support from the Australian government, but the revenue for program expansion is generated primarily from production and marketing profits.

Para Quad Industries provides employment and training for 400 spinal cord injured workers in Perth, Australia. Prime manufacturing of mainly office furniture and contracts with industry are the main sources of revenue. Dickerson (1983) has reported that Para Quad Industries adheres to the same high level production and quality control standards found in Bedford Industries and Centre Industries.

In Europe, Poland's Invalids' Cooperative Union is considered by Vash (1977) to be the most sophisticated model of segregated employment. According to Trampczynski (1973), Poland's first Cooperative Society for the Disabled was established for veterans of World War I. Conte (1982) has estimated that over 200,000 disabled citizens representing 30% of the disabled population of Poland are served in the Cooperatives. The Union has

435 enterprises which employ 288,000 people and the law requires that 70% of the workers must be disabled (Acton, 1981). Each enterprise is operated according to the rules and regulations established by the national Union and each member has a say in management issues (Redkey, 1975).

Rehabilitation services and training are offered in all but 35 of the cooperatives (Geist & Geist, 1982). The rehabilitation staff includes a physician, physical therapist, social worker and recreational therapist. Services include medical rehabilitation and vocational adjustment and training. Other programs focus on job modification, independent living and rehabilitation engineering.

Disabled workers and workers without disabilities earn the same wages in the cooperatives. Acton (1981) has reported that the activities of the cooperatives include the manufacturing of more than 150 industrial products (e.g., electrical equipment, textiles, plastics, footwear, rubber products, etc.). Additional revenue is produced through repair and property guarding services.

With the assistance of the national government, the cooperatives are able to generate profits that are invested in new workshops. This income is also used to expand the rehabilitation services offered by the cooperatives. The primary way the government assists is by allowing cooperatives to enjoy monopolies or the main production rights on certain products. In addition, the government gives liberal tax concessions to the cooperatives to compensate for the extra costs associated with the special accommodations needed by disabled workers. Similarly, grants are given to expand the number of workplaces for disabled persons. Wesolowski & Wesolowski (1980) have claimed that although the cooperatives offer some sheltered work and rehabilitation services, they should not be considered sheltered workshops. In contrast, they are industries that manufacture items not made elsewhere and, similar to all industries in Poland, they are subsidized by the government.

Conte (1982) has pointed out several important advantages of Poland's Cooperatives over sheltered workshops in the United States. Cooperatives have succeeded in providing full-time permanent employment for many disabled workers at competitive wages and with the standard fringe benefits that are found in open industry. In addition, cooperatives are semi-integrated with

approximately 30 percent of the workers non-disabled. Cooperatives also provide home work for persons too severely disabled to come to the work setting. Dolnick (1972) has estimated that severely disabled, homebound workers represent nearly 25 percent of the membership in the cooperatives.

Conte (1982) and Redkey (1975) have also acknowledged two problems with the Polish system. It can be argued that minimally disabled persons are segregated from competitive employment by working in cooperatives. The majority of workers employed in these settings have physical disabilities and only about 10 percent of the employees have intellectual handicaps. This questions whether separate cooperatives are really needed when high successful placement rates for physically disabled workers in factories are reported. Similarly, cooperatives do not employ many severely disabled workers because their lower production rates are inconsistent with the competitive, profit-making philosophy of these enterprises. In addition to homebound employment programs, some cooperatives have initiated sheltered workshops in an attempt to meet the vocational needs of the severely handicapped worker.

England's Remploy, Limited offers another example of government subsidized, segregated employment for disabled workers. Remploy was established in 1945 to provide training and employment to disabled veterans by the Disabled Persons' Employment Act. Receiving funding from the British Department of Employment, Remploy currently operates 94 production units that manufacture and offer a wide variety of products (e.g., furniture, leather goods, and textiles) and services (e.g., packaging and assembly) (True, 1985). Approximately 8,800 disabled workers and an additional 2,400 workers without disabilities are employed by Remploy (Pocock, 1984).

Pocock (1984) has claimed that a person with a disability has basically two vocational choices in England; employment in competitive industry or a sheltered workshop. According to Hughes (October, 1984, personal communication), however, sheltered employment is the only job option for a severely disabled individual when general unemployment is high. Pocock has argued that although legally defined as providing sheltered employment, Remploy has created a work environment that compares very favorably to open industry. The only sheltered workshop element within Remploy is that disabled workers have uncontested job security as long as they adhere to

company rules and regulations.

European nations also offer segregated employment to disabled workers in sheltered workshops. When compared to the sheltered employment in the United States, however, the workshops of Sweden, Denmark, Hungary, The Netherlands, Great Britain, Poland, and The Federal Republic of Germany are operated differently. According to Redkey (1975, 1979), Greenleigh Associates (1975), Carnley (1977) and True (1985) workshops in these countries are run like businesses. In most European workshops, an industrial orientation is stressed instead of rehabilitation services and training. In fact, necessary vocational services are often obtained in separate rehabilitation centers not affiliated with the workshop. Conte (1982) has maintained that sheltered workshops in Europe do not function as social service agencies but instead take a very business-like approach to their operations. Compared to the United States, the sheltered workshops in Europe:

- tend to be larger than workshops in the USA
- utilize more modern technology in their operations
- pay workers competitive or near competitive wages
- provide workers with typical fringe benefits found in industry
- tend to be more integrated with disabled and non-disabled employees working together
- emphasize long-term rather than transitional employment

Conte (1982, p. 135).

Vash (1977) has also asserted that sheltered workshops in the United States are perceived as places for transitional employment until competitive placement can be obtained. In contrast, European workshops are viewed as permanent, full-time employment for the vocationally handicapped worker.

UTILIZATION OF INTERNATIONAL APPROACHES TO VOCATIONAL REHABILITATION IN THE UNITED STATES

Given the wide variety of vocational alternatives for disabled persons that are found in other countries, the logical next question becomes how feasible would they be in the United States. In addition, if these alternatives are in fact possible, what research would be needed to determine

their value to vocationally handicapped Americans. Conte (1983) has contended that any major changes in the traditional segregated employment of disabled workers in sheltered workshops will require commitment and implementation by the federal government. It is clear that changes in our current national disability policy would have to occur in order for a quota-levy system, government grants to employers or government wage subsidies be used to foster competitive employment for disabled workers.

Competitive Employment

Several recent researchers (Kulkarni, 1983; Cooper, 1983; Hahn, 1984; Cornes, 1984) have endorsed the use of quota-levy system as a means of getting disabled workers placed into competitive jobs. Hahn (1984) has argued that people with disabilities personally prefer this strategy, further both Cooper (1983) and Cornes (1984) have maintained that quotas may be a most effective placement tool during times of high unemployment. Extending the successful strategy for the quota-levy system of Japan, Kulkarni (1983) has recommended that these laws cover mentally, as well as, physically disabled persons and that initial quota percentages be set low so employers are reasonably assured of achieving them. The quota may then be raised to be consistent with labor market conditions.

Levies and fines paid by employers for noncompliance with quota levels could be used to fund government grants to employers for improving work site accessibility and purchasing special tools or equipment that would enhance the job performance of disabled workers. This use of dollars generated by a quota-levy system would possibly negate the often voiced argument that employers are hesitant to hire disabled persons due to these expenses (Collignon, 1985). In addition to serving as a way to pressure employers to hire disabled workers and as a source of revenue for other employment strategies, Conte (1982) has argued that at the very minimum, a quota-levy system serves as reinforcement of a government's commitment to vocationally handicapped individuals.

Like quota-levy systems and government grants to employers, the use of wage subsidies to promote the competitive employment of disabled persons would require national policy changes in the United States. Sweden and The

Netherlands have extensively created full-time, permanent jobs for their handicapped workers in the public sector at considerable cost to taxpayers. In the United States, one of CETA's goals was to provide temporary employment to socially disadvantaged and disabled workers. According to Burkhauser (1985), CETA's demise can be attributed to its failure to meet this goal. Two strategies would need to be considered if government subsidized competitive employment for disabled workers was re-initiated in the United States. One strategy would call for a federal program charged with the responsibility of providing transitional services and job skill training which would lead to competitive placement in the private sector. Another strategy might be to replicate the programs of Sweden and Holland and have the federal government serve as a model employer of disabled persons.

Critics might contend that there is no need for a quota-levy system, government grants to employers, or government wage subsidies in the United States. They would argue that federal legislation (e.g., the Equal Employment Opportunity Act of 1963 and more recent Affirmative Action legislation) already exists to promote the employment of disabled workers. Many writers (Acton, 1981; Hahn, 1984; Thornton & Maynard, 1985) have strongly suggested that these laws have not been very effective in getting severely disabled persons into the workforce. In addition, the impact of the existing Targeted Jobs Tax Credit program in the United States needs to be further explored. Robinson (1985) has claimed that the Targeted Jobs Tax Credit program is currently threatened with termination due to federal budget cuts even though nearly 632,000 program jobs are projected for fiscal year 1985. The Committee for Employment Opportunities is actively lobbying for an extension of this program and it has estimated that approximately 44,000 program jobs for disabled workers are in jeopardy. While Robinson has argued that this program is involved in about 80 percent of the competitive placements of disabled workers, additional research is needed to address employers' utilization of, as well as reactions to, this legislation. The benefits obtained by disabled workers from this employer tax credit program also need to be further documented.

Fully Integrated Employment

Fully integrated employment options of supported work and affirmative industries would likewise require national policy initiatives in order to become viable alternatives for disabled workers. Conte (1983) has maintained that these models may also be examined in terms of the unique features of individual programs. Thornton and Maynard (1985) have reported that the preliminary research from the supported work demonstration projects is encouraging with regard to the relationship between client benefits and program costs. They caution, however, that more comprehensive longitudinal data, with valid comparison groups, are needed to validate the financial impact of supported work programs.

More information from supported work programs on client outcomes is also needed. Wehman (1981) has cited survey data that indicated 65 percent of the parents chose sheltered employment as the most appropriate type of job placement for their severely disabled son or daughter. This suggests that the parents/guardians of the target groups served by supported work programs are somewhat hesitant or uninformed about them. Additional research is needed to explore client reactions to supported work in comparison to the more traditional programs found in rehabilitation facilities. Finally, data on the purported enhanced quality of social interaction between clients and non-disabled persons in supported work programs is in need of documentation.

In contrast, the affirmative industry model offers a fully integrated employment alternative to disabled workers that would probably require few national policy changes. Employing both handicapped and non-handicapped workers, affirmative industries operate exclusively as competitive businesses. Rehabilitation services for clients would have to be provided by other facilities. Centre Industries of Australia, Japan Sun Industries and the "model factory" programs of Japan (Acton, 1981; Cho, 1984) need to be further explored and perhaps utilized in the United States. Center Industries in Wichita, Kansas (Jonus, 1976) and PAMCO of Bensenville, Illinois (Vash, 1977) have met with considerable success and further replication of these affirmative industries should be attempted with one noteworthy change. In keeping with the philosophy of the affirmative industries of Australia and Japan, an interesting application in the United

States would be to perceive the disabled worker as a full-time permanent employee and not a transitional worker in need of competitive placement.

Semi-Integrated Employment

Similarly, the expanded use of enclaves in the United States as a form of semi-integrated employment for disabled workers would require little, if any, national policy changes (Vash, 1977; Conte, 1983). Burger (1978), Gerber (1979) and Hansen (1969) have all described successful enclave projects in American industries. In reviewing the philosophy of enclaves found in Great Britain, Denmark, Sweden, and The Netherlands, Vash (1977) has argued that perhaps the major goal of enclave projects in our country should be changed. Enclaves in the United States are perceived to serve as transitional employment leading to a full-time job in private industry. Consistent with the enclaves found in Europe, maybe they should be structured to be full-time permanent employment for disabled workers in our country as well.

In contrast, the semi-integrated programs similar to Sweden's Archives Program and Adjustment Team, the Social Employment Program of The Netherlands and GIRPEH of France would require significant changes in the disability policies of the United States. Redkey (1975) has presented a strong argument that the social employment programs of Sweden and The Netherlands could easily be created in the United States if the federal government was willing to employ disabled workers on a large scale basis. He has claimed that these programs could generate an abundance of permanent public service jobs for many workers with disabilities. These types of programs would also project the government as a model employer for disabled Americans.

Segregated Employment

The Invalids' Cooperative Unions of Poland offer a segregated employment option for handicapped workers that would demand a significant change in the disability policies of the United States. A great deal of support by the federal government would be required in order to implement a cooperative system similar to that found in Poland. This support would more likely take

the form of production monopolies on specific goods and services in the American economy. Significant expansion of the NISH and NIB legislation could feasibly supply the necessary government support for cooperative programs. The extensive homebound work programs offered to severely disabled persons by the Polish cooperatives are also worthy of further study and possible replication in the United States.

Other forms of segregated employment would probably require less change in American national policies for disabled workers. Several writers (Vash, 1977; Acton, 1981; Pocock, 1984; Redkey, 1975, 1979; Carnley, 1977; Conte, 1982; and True, 1985) have documented a very basic difference between sheltered employment programs found in the United States and those found elsewhere. Specifically, the sheltered workshops of Australia and Europe are generally run more like businesses than those in the United States. They are larger, use more modern technology, compensate workers with competitive wages and better fringe benefits, and stress more of an industrial orientation in comparison to American workshops. The workshops found in these other countries also offer full-time permanent employment to people with disabilities. In contrast, the philosophy of most sheltered workshops found in the United States is to provide the rehabilitation services and training needed by the disabled worker for competitive employment.

Given the historically poor record for competitive placement rates (13 percent) found in American sheltered workshops (Greenleigh Associates, 1975), a change in philosophy towards that of the European and Australian workshops may be in order. Abilities, Inc. of New York appears to have already followed the segregated employment examples of other countries. This profit oriented organization offers full-time permanent work to severely disabled Americans.

SUMMARY

In summary, this paper has reviewed international vocational rehabilitation. Its purpose was to discuss possible ways to improve the current rehabilitation efforts in the United States by exploring alternative approaches found in other countries. Significant national policy changes would be required if competitive and fully integrated employment for disabled

workers were promoted through a quota-levy system, government grants to employers, government wage subsidies, or supported work programs. Employment options for disabled Americans based on the affirmative industry model, enclaves, or sheltered workshops operated as businesses instead of social service agencies, would undoubtedly require less national policy initiatives. Research is needed to explore the replicability of these employment options in the United States as well as client satisfaction with them.

Historically, sheltered workshops in the United States have been perceived as transitional places of employment where a disabled person will become "job ready" for placement in competitive industry. It is ironic that given the well documented failure of workshops to fulfill this role, federal interventions in the form of a quota-levy system, government grants to employers, or government wage subsidies have not been more fully utilized in this country. More national policies are needed if the American vocational rehabilitation process is to continue the promotion of competitive employment for disabled workers. In contrast, perhaps the role and image of sheltered employment in the United States needs to be changed to be more consistent with workshops found in Australia and Europe. Following the models found in these other countries, American sheltered workshops could be structured to provide permanent employment to disabled workers. These workers could be engaged in meaningful employment, interact with non-disabled co-workers, earn competitive wages and receive fringe benefits equivalent to those found in private industry.

Now in the mid 1980's, the supported employment model appears to be the focal point of the vocational rehabilitation efforts of the United States government. There are no simple answers at this time, however, as to the best approach. Clearly, a national policy on the role of the government in sheltered, transitional and non-transitional competitive employment is lacking yet critically needed.

REFERENCES

Acton, N. (1981). Employment of disabled workers: Where are we going. International Labor Review, 120, 1-14.

Bellamy, G., Horner, R., & Inman, D. (1979). Vocational Habilitation of Severely Retarded Adults: A Direct Service Technology. Baltimore: University Park Press.

Bellamy, G., & Melia, R. (1984). Summary of OSERS Conference on Supported Employment. Washington, DC: National Institute on Handicapped Research.

Bowe, F. (1984). Disabled Adults in America: A Statistical Portrait Drawn from Census Bureau Data. Unpublished manuscript, President's Committee on Employment of the Handicapped, Washington, D.C.

Brickey, M. (1974). Normalization and behavior modification in the sheltered workshop. Journal of Rehabilitation, 40, 44-46.

Brown, L., Nisbet, J., Ford, A., Sweet, M., Shraga, B., & Gruenwald, L. (1982). Educational Programs for Severely Handicapped Students. Madison, Wisconsin: University of Wisconsin and Madison Public Schools.

Burger, G. (1978). Program Models for Projects with Industry. Chicago: Research Utilization Laboratory, Jewish Vocational Service.

Burkhauser, R. (1985, April). United States Disability Policy: An Analysis within the Context of the European Experience. Paper presented at the Conference on the Economics of Disability, Washington, DC.

Carnley, N. (1977). Differences between American and European workshops: Implications for training. Vocational Evaluation and Work Adjustment Bulletin, 10, 23-30.

Cho, D. (1984). An alternative employment model for handicapped persons. Journal of Rehabilitation Administration, 8, 55-61.

Cho, D., & Schuermann, A. (1980). An employment model of severely physically handicapped persons: Centre Industries, Sydney, Australia. Journal of Rehabilitation Administration, 4, 157-164.

Collignon, F. (1985, April). The Role of Reasonable Accommodation in Employing the Disabled in Private Industry: Past Experience and Future Policy Direction. Paper presented at the Conference on the Economics of Disability, Washington, DC.

Conte, L. (1982). Manpower policy and the disabled person: An international perspective. Rehabilitation Literature, 43, 130-135.

Conte, L. (1983). Sheltered Employment Services and Programs. Washington, DC: National Rehabilitation Information Center.

Cooper, N. (1983). New trends in vocational rehabilitation and employment. International Rehabilitation Review, 3-4.

Cornes, P. (1984). The Future of Work for People with Disabilities: A View from Great Britain. New York: World Rehabilitation Fund, Inc.

Croxen, M. (1982, September). Disability and Employment: Choosing a Way of Life. Report prepared for the Programme of Research and Actions for the Social Integration of Disabled People, Commission of the European Communities.

Desmond, R. (1983). Innovative and exemplary placement programs in Australia. In D. Woods (Ed.), Rehabilitation in Australia and New Zealand: U.S. Observations. New York: World Rehabilitation Fund, Inc.

Dickerson, A. (1983). Independent living and industrial sheltered employment. In D. Woods (Ed.), Rehabilitation in Australia and New Zealand: U.S. Observations. New York: World Rehabilitation Fund, Inc.

Dietl, D. (1985). Human Resources Center: Writing their own chapter "in search of excellence." Journal of Rehabilitation, 51, 7-20.

Dolnick, M. (1972). Trip Report: Poland. Washington, DC: U.S. Department of Health, Education, and Welfare, Rehabilitation Services Administration.

Durand, L., & Durand, J. (1978). The Affirmative Industry. Saint Paul: Minnesota Diversified Industries.

Durand, J., & Neufeldt, A. (1980). Comprehensive vocational services. In R. Flynn & K. Nitsch (Eds.), Normalization, Social Integration, and Community Service. Baltimore, MD: University Park Press.

Emanuel, H., Halberstadt, V., & Petersen, C. (1984). Disability policy in the Netherlands. In R. Haveman, V. Halberstadt, & R. Burkhauser (Eds.), Public Policy Toward Disabled Workers: Cross-National Analyses of Economic Impacts. Ithaca, NY: Cornell University Press.

Farley, D. (1978). Employment for the disabled: Sheltered or integrated. In E. Chigier (Ed.), New Dimensions in Rehabilitation. Tel Aviv, Israel: Gomeh Scientific Publications.

Federal Register. (September 4, 1985). Opportunities in Employment for Individuals with Developmental Disabilities, 50, Washington, DC: Author.

Frey, W. (1985). Introduction. In R. Habeck. D. Galvin, W. Frey, L. Chadderdon, & D. Tate (Eds.), Economics and Equity in Employment of People with Disabilities: International Policies and Practices, East Lansing, MI: University Center for International Rehabilitation, Michigan State University.

Geist, G., & Geist, C. (1982). A view of Poland and vocational rehabilitation. Journal of Rehabilitation, 48, 63-66.

General Accounting Office. (1981). Stronger Federal Efforts Needed for Providing Employment Opportunities and Enforcing Labor Standards in Sheltered Workshops. Washington DC: Author.

Gentile, F. (1977, October). A Model Sheltered Workshop. Final report to DHEW/RSA on Independent Living Workshop-Seminar, Berkeley, CA.

Gerber, N. (1979). The job worksite: An additional resource in preparing psychiatric clients for job placement. Journal of Rehabilitation, 45, 39-41.

Greenleigh Associates, Inc. (1975). The Role of the Sheltered Workshop in the Rehabilitation of the Severely Handicapped. Washington, DC: Author.

Hagner, D., & Como, P. (1982). Resource Manual for Work Stations in Industry. Menomonie, WI: Materials Development Center, University of Wisconsin-Stout.

Hahn, H. (1984). The Issue of Equality: European Perceptions of Employment for Disabled Persons. New York: World Rehabilitation Fund, Inc.

Hansen, C. (1969). The work crew approach to job placement for the severely retarded. Journal of Rehabilitation, 35, 26-27.

Hill, M., Hill, J., Wehman, P., Revell, G., Dickerson, A., & Noble, J. (1985). Time Limited Training and Supported Employment: A Model for Redistributing Existing Resources for Persons with Severe Disabilities. Richmond, VA: Rehabilitation Research and Training Center, Virginia Commonwealth University.

Institute for Information Studies. (1982). Fountain House: A club for former mental patients. Rehab Brief, 5.

Jochheim, K. (1985). Quota system policy in the Federal Republic of Germany. In R. Habeck. D. Galvin, W. Frey, L. Chadderdon, & D. Tate (Eds.), Economics and Equity in Employment of People with Disabilities: International Policies and Practices, East Lansing,

MI: University Center for International Renabilitation, Michigan State University.

Jonas, J. (1976). Australian employment concept flourishes in Kansas. Rehabilitation World, 1, 10-13, 30-31.

Kulkarni, M. (1983). Quota Systems and tne Employment of the Handicapped. East Lansing, MI: University Center for International Renabilitation, Michigan State University.

Mallet, A. (1985). GIRPEH A new approach to a social problem: Employment for the handicapped. In R. Habeck. D. Galvin, W. Frey, L. Chadderdon, & D. Tate (Eds.), Economics and Equity in Employment of People with Disabilities: International Policies and Practices, East Lansing, MI: University Center for International Rehabilitation, Michigan State University.

Matsui, R. (1985). The Japanese quota system and the role of the national association for the employment of the handicapped. In R. Habeck. D. Galvin, W. Frey, L Chadderdon, & D. Tate (Eds.), Economics and Equity in Employment of People with Disabilities: International Policies and Practices, East Lansing, MI: University Center for International Rehabilitation, Michigan State University.

Menz, F. (1983). Manpower Needs in Renabilitation Facilities: 1980-1990. Menomonie, WI: Rehabilitation Research and Training Center, University of Wisconsin-Stout.

Menz, F. (1985, September). Vocational Renabilitation Facilities: The Present Environment: An Overview. Paper presented at the Region VI Facilities Conference on Developing Roles and Functions of Vocationally Oriented Facilities, Hot Springs, AR.

Mintaredja, H. (1978, January). Problems Concerning a Quotum System for the Disabled in the Local Market in Developing Countries. Paper presented at the Second International Conference on Legislation Concerning the Disabled, Manila, The Philippines.

Nelson, N. (1971). Workshops for the Handicapped in the United States. Springfield, IL: Charles C. Thomas.

Pocock, C. (1984, June). Vocational Rehabilitation. Paper presented at the Fifteenth World Congress of Rehabilitation International, Lisbon, Portugal.

Redkey, H. (1975). A Way of Looking at Sheltered Workshops for the 1970's. Menomonie, WI: Stout Vocational Renabilitation Institute, University of Wisconsin-Stout.

Redkey, H. (1979). A different kind of workshop. Amicus, 4, 270-272.

Revell, W., Wehman, P., & Arnold, S. (1984). Supported work model of competitive employment for persons with mental retardation: Implications for rehabilitation services. Journal of Rehabilitation, 50, 33-38.

Robinson, D. (1985). Targeted Jobs Tax Credit: Third Progress Report. Washington, DC: Committee for Employment Opportunites.

Sjostrom, B. (1985), The Swedish approach to employing the disabled. In R. Habeck. D. Galvin, W. Frey, L. Chadderdon, & D. Tate (Eds.), Economics and Equity in Employment of People with Disabilities: International Policies and Practices, East Lansing, MI: University Center for International Rehabilitation, Michigan State University.

Stubbins, J. (1982). The Clinical Attitude in Rehabilitation: A Cross Cultural View. New York: World Rehabilitation Fund, Inc.

Taylor, T. (1983). Abilities. Inc. - Successful Production Workshop, New Zealand. International Rehabilitation Review, 6.

Thornton, C., & Maynard, R. (1985, April). The Economics of Transitional Employment and Supported Employment. Paper presented at the Conference on the Economics of Disability, Washington, DC.

Trampczynski, B. (1973). Co-operatives of the disabled in Poland. International Labor Review, 108, 423-437.

True, T. (1985). REMPLOY--Its work and its people. In R. Habeck, D. Galvin, W. Frey, L. Chadderdon, & D. Tate (Eds.), Economics and Equity in Employment of People with Disabilities: International Policies and Practices, East Lansing, MI: University Center for International Rehabilitation, Michigan State University.

Vash, C. (1977). Emerging Issues in Rehabilitation: Sheltered Industrial Employment. Washington, DC: Institute for Research Utilization.

Wesolowski, M., & Wesolowski, H. (1980). Vocational Rehabilitation in Poland. American Rehabilitation, 6, 12-15.

Wehman, P. (1981). Competitive Employment: New Horizons for Severely Disabled Individuals. Baltimore, MD: Paul Brookes, Inc.